



US005549624A

United States Patent [19]**Mirigian et al.**[11] **Patent Number:** **5,549,624**[45] **Date of Patent:** **Aug. 27, 1996**[54] **FIBERED VASOOCCLUSION COILS**[75] Inventors: **Gregory E. Mirigian**, Hayward; **Nga T. Van**, Santa Clara, both of Calif.[73] Assignee: **Target Therapeutics, Inc.**, Fremont, Calif.[21] Appl. No.: **265,188**[22] Filed: **Jun. 24, 1994**[51] Int. Cl.⁶ **A61B 19/00**[52] U.S. Cl. **606/191**[58] Field of Search 623/111, 12; 606/1,
606/108, 190-198, 151[56] **References Cited**

U.S. PATENT DOCUMENTS

4,994,069 2/1991 Ritchart et al. .

5,226,911 7/1993 Chee et al. .
5,304,194 4/1994 Chee et al. .*Primary Examiner*—Stephen C. Pellegrino*Assistant Examiner*—Glenn Dawson*Attorney, Agent, or Firm*—Morrison & Foerster[57] **ABSTRACT**

This invention is a vasoocclusive device. It is placed in the vasculature of an animal to form thrombus in a selected site such as an aneurysm or AVM. The device uses a central coil having thrombogenic fibers placed on the coil in a specified fashion. The coil will pass through the lumen of a vascular catheter and form a convolution when ejected from the catheter's distal end. The fibers are attached to the coil and cooperate with the coil so that upon ejection from the catheter, the convoluted coil forms a shape in which the central region contains the majority of these fibers.

6 Claims, 2 Drawing Sheets